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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,227	05/29/2001	Thomas Z. Fu	IP 6037	5926

7590 01/27/2006

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EXAMINER
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DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/867,227	<b>Applicant(s)</b> FU ET AL.	
	<b>Examiner</b> Tamra L. Dicus	<b>Art Unit</b> 1774	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-19,21-24,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-19,21-24,34 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

The RCE is acknowledged.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-19, 21-24 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,605,750 to Romano in view of USPN 6,379,780 to Laney et al.

Romano teaches a microporous ink receiving media comprising a microporous polymeric sheet/film that may be stretched at col. 12, lines 8-24 (claim 34) where a microparticle coating is applied on one side of the film (claims 15 and 34). See col. 2, lines 20-24, col. 3, line 24, col. 5, lines 6-35, and col. 18, lines 55-68. The microporous material coating comprises a crosslinked polymethyl methacrylate (col. 8, line 55) and colloidal inorganic silica or alumina and submicroscopic particles (col. 6, lines 54-68, col. 7, lines 45-48, lines 65-col. 8, line 5) (meeting instant claims 15-17's colloidal inorganic particles, claim 34's limitation of a submicron particle, and the coating composition of claim 35). See col. 13, lines 29-45. Romano teaches it is also known to add polyurethane (PU) at col. 3, line 41, (claim 18) and polyvinyl alcohol as a binder at col. 14, lines 34-36 (claim 19). The binder is added in 5-75 wt % and the colloidal inorganic boehmite particle from 5-50 wt%, thus because the parts recited equate to 100 (weight percentage is based off total of 100), the weight percentage range recited in the prior art is within

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the claimed range. See col. 14, lines 40-46. A substrate is laminated to the microporous film at col. 2, lines 25-39 and col. 3, lines 18-23 (claim 24). Romano teaches a microparticle coating further comprising well known additives of claims 22 and 23 such as a plasticizer and surfactants such as non-ionic, cationic, or fluorocarbon surfactants at col. 2, line 46 and col. 8, lines 59-61. Romano adds polypropylene at col. 4, line 12 (claim 21). Thus, claims 15-19, 21-24 and 34-35 are met.

While Romano teaches a crosslinked polymethyl methacrylate (col. 8, line 55), Romano does not explicitly teach it contains a crosslinking agent.

Laney teaches a crosslinking agent such as divinylbenzene used in crosslinked polymethyl methacrylate excellent in ink-receiving properties (col. 1, lines 1-10, col. 5, lines 9-18).

It would have been obvious to one having ordinary skill in the art to have modified the ink receiving media of Romano to include a crosslinking agent because Laney teaches a crosslinking agent such as divinylbenzene used in crosslinked polymethyl methacrylate excellent in ink-receiving properties (col. 1, lines 1-10, col. 5, lines 9-18).

### ***Response to Arguments***

Applicant's arguments have been considered, and are persuasive. Romano is still used to essentially teach the claimed invention. Thus, Laney is used to show that crosslinked PMMA includes a crosslinking agent.

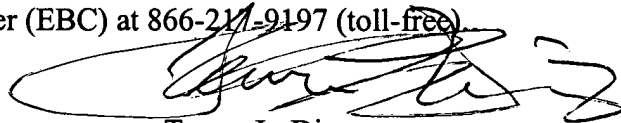
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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tamra L. Dicus  
Examiner  
Art Unit 1774

January 21, 2006



RENA DYE  
SUPERVISORY PATENT EXAMINER

A.U. 1774 1/23/06